REMARKS

By the above actions, claims 1, 16, 19-22, and 35 have been amended. In view of these actions and the following remarks, further consideration of this application is now requested.

At the outset, the undersigned wishes to thank the Examiner for the lengthy discussions permitted at a personal interview conducted on July 13, 2006. As a result of these discussions agreement was reached as to language for the independent claims that would be both generic to, e.g., both the Fig. 1 and Fig. 6 embodiments, yet also overcome the rejections under 35 USC § 112 first and second paragraphs. Since this agreement has been implemented with respect to independent claims 1 and 35, withdrawal of the Examiner's rejections under the first paragraph of § 112, is in order and is now requested.

All of the claims to the elected specie have been rejected again under 35 U.S.C. § 103 based upon the disclosure of the patent to Aftergut. This rejection is submitted to be inappropriate for the following reasons.

Firstly, the Examiner's dismissal of the specific diameters recited in the claims as being obvious to one of ordinary skill in continuing reliance on the decision in the case of *In re Aller* as merely routine skill in the art in discovery the optimum or workable range for the general conditions disclosed by Aftergut fails to address the several reasons why such reliance is improper that were pointed out in applicant's preceding responses.

That is, it was pointed out that the *In re Aller* case related to a chemical process invention in which the difference relative to the prior art was changes in temperature and concentration were found to be minor changes that were "merely different in degree and not in kind from the reference process." (*In re Aller*, last page last paragraph.) Additionally, the particular position for which the Examiner has relied upon the *In re Aller* case was actually cited in the *In re Aller* decision by citation to the case of *In re Swain et al.*, 156 F.2d 239, 70 USPQ (BNA) 412, a chemical composition case in which one cellulose was substituted for another with no change in result.

Apart from the fact these cases appear to have been decided under the prior "invention" standard that was replaced by the "obviousness" standard of the 1952 Patent Act, these decisions acknowledged that "changes such as these may impart patentability ... if the

particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art," *In re Aller*, at 235. That is, in fact, the situation in the present case where the Aftergut patent and the present invention use different values to obtain results which are different in kind, not merely of degree as will be commented upon more fully below.

However, even if the antique cases cited by the Examiner once represented good law, it is submitted that they do not represent the law of patentability as it now stands. In this respect, the Examiner's attention is directed to the case of *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984) which held that the mere fact that a modification could be made does not make it obvious absent a teaching of desirability, and the holding of the *Ex Parte Gerlach and Woerner*, 212 USPQ (BNA) 471 (USPTO Bd . of App. 1980) which, in a mechanical case, held that "[t]here is nothing in the statutes or the case law which makes 'that which is in the capabilities of one skilled in the art' synonymous with obvious" and since the Examiner was unable to provide a "reason why, absent the instant disclosure, one of order skill in the art would be motivated to" make the change claimed, the Examiner's rejection was reversed. It is submitted that such cases reflect the current state of the law and the fact that the Examiner is obligated to demonstrate why he considers a change to be obvious and that he cannot merely ignore claimed ranges without explaining why it would be obvious to use the claimed ranges in accordance with the teachings of the prior art. In this regard, in the present case, the Examiner has failed to take into consideration the teachings of Aftergut as to the results sought to be obtained and has failed to explain how Aftergut could perform in the same manner sought by Aftergut if his device were modified to have values with the ranges claimed by the present applicant, which ranges are designed to achieve entirely different results.

More specifically, the present invention comprises "an atomizer" that "is capable of atomising small doses of liquid in order to produce a 'dry' spray of liquid, i.e., a spray of liquid using much less solvent than prior art aerosol finger operated spray pumps" as noted in paragraph [0003]. This result is achieved by the finger operated spray pump according to the invention, by providing "an outer diameter of the piston and the corresponding inner diameter of the cylinder of between about 0.5 mm and about 4.0 mm, the nozzle-diameter(s)

of the atomizer being between 15 μm and 150 μm, the operating pressure within the cylinder during the spray stroke with average finger force being between 10 bar and 400 bar," as indicated in paragraph [0003]. Still further, as noted in paragraph [0004], a "smaller diameter of the piston leads to a higher pressure" being obtainable by the spray pump. Briefly summarized, the present invention seeks to maximize pressure to minimize the volume of liquid ("liquid dose per spray of between 5 μl and 300 μl, preferably between about 10 μl and about 100 μl, most preferably between about 20 μl and about 50 μl;" paragraph [0007]) in the atomized spray produced so as to produce a so-called "dry" spray.

In direct contrast, Aftergut teaches that he situates both the piston and cylinder above the container surrounding its neck for "giving the pump a relatively large diameter so that a relatively large volume of liquid can be pumped in a short stroke, i.e., a "wet" spray will be produced rather than a dry one. Thus, while the present applicant minimizes the size of his piston and cylinder unit to drive up pressure and minimize fluid discharge, Aftergut has designed his sprayer to perform in the exact opposite manner. How could it have been obvious to one of ordinary skill in the art to apply the ranges claimed by the present applicant to the sprayer of Aftergut when it would render it unsuitable for Aftergut's purpose of maximizing the volume of liquid discharged with a short stroke. Furthermore, since Aftergut is a high volume, low pressure sprayer, there is no reason for anyone to make his sprayer of materials which can "withstand an operating pressure of at least about 100 bar" or 400 bar as is disclosed and claimed by the present applicant.

Still further, the piston and cylinder of the present invention have a diameter of between "0.5 mm and about 4.0 mm" in claim 1 and "1.5 mm and about 2.5 mm" in claim 35. Bearing in mind that the piston and cylinder of Aftergut are expressly taught to be larger than the mouth of the bottle that it is designed for use on so as to surround its neck, inquiry is made of the Examiner as to what bottles of the type shown by Aftergut are known to exist which have a neck that is less than 1.5 to 4 mm as would be necessary for a piston and cylinder in accordance with Aftergut's teaching to have dimensions in the range called for by the present applicant? Even then, given Aftergut's desire to produce a large volume discharge, why would his teaching lead to the use of a nozzle having a diameter of between 15 μm and 150 μm, which would severely restrict the output volume contrary to Aftergut's

high volume goal? Such a diameter nozzle only makes sense in the context of the present inventor's goal of achieving a "dry" spray having a minimal liquid content.

On the basis of the foregoing, it should be readily apparent that applicant's difference in dimensions leads to a result that is different in kind (dry vs. wet spray), not merely degree relative to Aftergut's sprayer, and that anyone following Aftergut's teachings would be led away from those conditions found to be critical in accordance with the present invention. Thus, the present invention cannot be considered to be obvious from the teachings of the Aftergut patent and the rejection based thereon should be withdrawn, such action being hereby requested.

In response to all of these arguments, the Examiner merely states the fact that the dimensions of the piston and cylinder set the dosage and that the size of the nozzle set the droplet size so that it would have been obvious to use the dimensions claimed by the present applicant if small quantities and small droplets were desired. Apart from the fact that such is not entirely correct since the pressure produced plays an equal role in the nature of the spray produced (as noted above and indicated in the present application), e.g., whether as stream or an atomized mist is produced and other factors, such as stroke length, can affect the dosage as well, the simple fact is that that no basis exists for concluding that one would find it obvious to modify the low pressure wet spray device of Aftergut to produce a high pressure dry spray pump as disclosed and claimed by the present applicant, or that the particular combination of dimensional values could be arrived at without undue experimentation.

In regard to the Examiner's citation of the case of *In re Hutchision*, 69 USPQ 138, it is pointed out that the *Hutchison* decision should be viewed as having been overruled by the decision of *In re Venezia*, 530 F.2d 956, 189 USPQ 149 (CCPA 1976) to the extent that it is inconsistent therewith. As noted in MPEP § 2173.05(g), "the Court held that limitations such as 'members adapted to be positioned' ... serve to precisely define present structural attributes of interrelated component parts of the claimed assembly." Thus, claims 4-6, 33, 34, and 37 must be considered as requiring an assembly of components that are interrelated in a manner which would produce the claimed results. Furthermore, even using the Examiner's capability standard, the Examiner has failed to demonstrate how Aftergut's spray has such a

capability or how and why it would be obvious to modify Aftergut's device to posses such a capability. This factor has also been ignored in the Examiner's current rejections.

As for the rejections based upon the combination of the Aftergut patent with either the Nozawa et al. (claim 23) or Corsette (claim 26) patents, as noted in applicant's last response, there is nothing in the disclosure of these patents which can overcome the serious deficiencies in the Examiner's reliance on the Aftergut patent commented upon above. For example, the Nozawa et al. patent is merely relied upon as a teaching of the use of a filter. However, even equipped with a filter, Aftergut's sprayer would still differ from the present invention in all of the above set forth manners which would preclude anyone from finding the present invention obvious based on its disclosure. Similarly, Corsette is merely relied upon as a teaching of the use of a vent opening. But, even with a vent opening no one could be led to the present invention based upon Aftergut's disclosure. Thus, these rejections should also be withdrawn and such action is now requested.

However, if the Examiner should continue to maintain these rejections, it is requested that he specifically address the points raised by applicant, both as to the distinctions of the invention and the inappropriateness of his reliance on the *In re Aller* and *In re Hutchision* cases.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise, which could be eliminated through discussions with applicant's representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby be expedited.

Respectfully submitted,

By: _____
David S. Safran
Registration No. 27,997

Customer No. 25570
Roberts Mlotkowski & Hobbes P.C.
P.O. Box 10064
McLean, VA 22102
Direct Telephone: (703) 584-3273